



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

60604-3590

REPLY TO THE ATTENTION OF

SE-5J

MEMORANDUM

DATE: AUG 31 2001

SUBJECT: ACTION MEMORANDUM - Request for a Time Critical Removal Action at the Eagle Pitcher Residential Site, East St. Louis, St. Clair County, Illinois
Site ID#: B5U6

FROM: Kevin R. Turner, On-Scene Coordinator
Emergency Response Section 2
Michael D. Harris, On-Scene Coordinator
Emergency Response Section 2
Thomas Cook, On-Scene Coordinator
Emergency Response Section 3

TO: William E. Muno, Director
Superfund Division

THRU: Richard Karl, Chief
Emergency Response Branch,
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request approval to expend up to \$264,385 to abate an imminent and substantial threat to public health and the environment present at the Eagle Pitcher Lead Residential Site, East St. Louis, St. Clair County, Illinois (Latitude - 38° 38'09" North and Longitude - 90° 08'56" West). This action is necessary to mitigate the immediate threat to public health and the environment posed by the presence of uncontrolled hazardous substances on Site, including soils containing elevated levels of lead.

The response action proposed herein will mitigate Site conditions by removal and off-site disposal of the contaminated soil. The high levels of lead in surface soil at concentrations considered hazardous, the presence of residential properties on the Site and its proximity to other businesses requires that this action be classified as a time critical removal. The project will require an estimated working 20 days to complete.

EPA Region 5 Records Ctr.



248108

There are no nationally significant or precedent setting issues associated with the Eagle Pitcher Lead Residential Site. The Eagle Pitcher Lead Residential Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# ILN000508196

A. Site Description

1. Site history

Sampling activities performed by Ecology and Environment on December 11 through 13, 1995 indicated elevated levels of lead in residential soil. A Site Assessment was conducted at the Eagle Pitcher Lead Residential Site on April 26, 2001 to further evaluate the extent of contamination. The sample results from the April 26, 2001 assessment also indicates elevated levels of lead in the residential soil.

2. Physical location

The Eagle Pitcher Lead Residential Site is located in a mixed residential and commercial area in the northwest portion of East St. Louis, Illinois. The Site includes three blocks of residential property located between Bowman Avenue to the northwest, and State Highway 3 to the southwest, 2nd Street to the northeast, and railroad tracks to the southeast. About 15 residences are located in the study area. Four schools and one hospital are located within 1 mile of the Site. The Site is located directly adjacent to the former Eagle Pitcher Lead Facility, which is why it is referred to as the Eagle Pitcher Lead Residential Site. The Residential Site was never owned by Eagle Pitcher Lead Company.

According to the Region 5 Superfund Environmental Justice Analysis, the group of residents closest to the Site reside in census tract #504201, block group #5. This block group has a total population of 182. Of the 182, 97% are classified as minority. Approximately 86% of the families residing in this block group have an income of less than the established State low income level. The demographic conditions indicate an environmental justice priority for the community around this Site.

3. Removal Site evaluation

Site activities were conducted at the Eagle Pitcher Lead Residential Site on April 26, 2001. The START field crew consisted of Joe Parish, Art Currier, and Brian Schlieger from Tetra Tech, and Keith Hughes from Project Resources, Inc. (PR). U.S. EPA On-Scene Coordinators (OSC) included Mike Harris and Tom Cook.

START was tasked to document Site conditions, collect soil samples, and prepare and submit samples for laboratory analysis. PR was tasked to screen the Site with a NITON™ x-ray

fluorescent (XRF) spectrometer.

The PR field crew marked the Site for sampling at potentially sensitive areas using survey flags or marking paint. No grid system was established at this Site because the size of the area under investigation was too large. XRF spectrometer readings (with 95 percent upper and lower confidence limits) were taken at marked or flagged locations on bare soil that had been cleared of vegetation and humus.

The PR field crew took XRF spectrometer readings for lead, which were compared with the U.S. EPA Region 9 preliminary remediation goal (PRG) for residential soil of 400 mg/kg. The samples submitted for laboratory analysis and parameters analyzed for were chosen by START to ensure that all three parcels of the Site were sampled and to limit the number of samples submitted. In addition, sampling focused more on the southwest parcel of the Site because it is located the closest to the former manufacturing facility.

The START field crew marked the locations as potential auger sampling points for laboratory analysis. At sampling locations 025-06 (1,130ppm), 025-08 (5,260ppm), and 025-09 (2,310ppm), soil samples were screened with the XRF spectrometer at increments of 6 inches. Screened samples that had contained the highest lead levels from each of these three locations were analyzed for Resource Conservation and Recovery Act (RCRA) metals, toxicity characteristic leaching procedure (TCLP) lead, polychlorinated biphenyls (PCB), semivolatile organic compounds (SVOC), volatile organic compounds (VOC), and pH. All other samples were analyzed for RCRA metals only.

The START field crew collected samples at the ground surface and in increments of 6 inches to a maximum depth of 18 inches below ground surface (bgs) using a stainless-steel auger and homogenized in pie pans. The auger was decontaminated after collection of each sample using Alconox and water with a final, deionized water rinse. Selected samples were placed in sample containers and submitted for laboratory analysis. No samples were collected from below 18 inches bgs. Samples were stored on ice and submitted to the Environmetrics, Inc. laboratory in St. Louis, Missouri, on April 27, 2001.

B. State and Local Authorities' Role

1. State and local actions to date

The Eagle Pitcher Lead Residential Site came to the Removal Branch's attention through the Gateway Team. The Gateway Team funded the Illinois Department of Public Health (IDPH) to conduct soil lead screening in the town of East St. Louis. IDPH targeted old industries in its sampling efforts. The Gateway Team, through the direction of Noemi Emeric with U.S. EPA, convened an ad hoc group targeting lead as a contaminant of concern for East St. Louis. This group, which included St. Mary's Hospital, collected blood lead data from children in East St. Louis. The Removal Branch became involved based on the IDPH sample results showing high soil lead data in old industrial areas bordering residential areas (as high as 30,000 ppm) and the St. Mary's study showing children with elevated blood lead levels.

Currently, Illinois Environmental Protection Agency (Illinois EPA) in conjunction with Illinois Department of Transportation (IDOT) are pursuing technical and enforcement lead against the current owner of the former Eagle Pitcher Industrial Site. IDOT currently has plans for the expansion of Illinois State Route 3, which runs adjacent to the former Eagle Pitcher Industrial Site and the Residential Site. Illinois EPA has taken the lead on remediation of the former industrial Site.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Eagle Pitcher Lead Residential Site present an imminent and substantial threat to the public health, or welfare, and the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP), Section 300.415, Paragraph (b)(2). 40 C.F.R. § 300.415(b)(2)(I), (iii) and (v), respectively, specifically allows removal actions for:

- 1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

The Eagle Pitcher Lead Residential Site is located in a mixed residential and commercial area in the northwest portion of East St. Louis, Illinois and currently consists of three city blocks

The IDPH documented the presence of lead in soil above health standards both near the former facility and in the surrounding neighborhood. The health concerns at this Site are related to the elevated levels of lead in soil in residential neighborhoods, the proximity to schools and other businesses, potentially exposing young children, pregnant women and elderly individuals to high levels of lead contamination.

The effects of lead exposure are more severe for young children and the developing fetus through exposure to a pregnant woman. The harmful effects of lead included premature births, lower birth weight, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. In adults, lead increases blood pressure, induces anemia as a result of the inhibition of hemoglobin synthesis, decreases reaction time, affects memory, and damages the male reproductive system. Lead is also considered by U.S. EPA to be a class B2 or probable human carcinogen. Toxicity information is summarized in the references, ATSDR, 1993 and U.S. EPA, 2000.

Lead was found wide spread throughout the Site, with most of the area above the U.S. EPA Site specific action level of 400 ppm for residential land use scenarios. The highest concentration of lead detected by the IDPH was 5,056 ppm and by the U.S. EPA at 5,771 ppm. In addition, IDPH conducted blood lead screening within this neighborhood.

In Illinois, the Illinois Department of Public Health guidelines state that any child with a blood lead level between 10 and 14 µg/dL is tested again in a few months. If the confirmed blood level is at least 15 µg/dL, case follow-up is conducted. St. Mary's Hospital has agreed to take on the

responsibility to continue testing within East St. Louis. Blood lead levels from the children in this neighborhood ranged from 0 to 16 µg/dL, with 8 children above 10 µg/dL. IDPH recommends that remediation efforts be initiated on the basis of the high levels of lead found in the surface soils and based upon the number of children in the immediate area who tested above the recommended blood screening levels. Since the neurological effects on young children and the developing are considered to be irreversible, even short term exposures to elevated lead levels are of a public health concern.

References:

ATSDR. 1993. Toxicological Profile for Lead. Agency for Toxic Substances and Disease Registry, Division of Toxicology. Atlanta, GA. U.S. Department of Health and Human Services, Public Health Service.

U.S. EPA. 2000. Integrated Risk Information System (IRIS). Database information located at <http://www.epa.gov/iris/subst/index.htm>; U.S. Environmental Protection Agency.

- 2) Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release;

The IDPH and U.S. EPA XRF and analytical data documented total lead levels to be greater than 5,700 ppm at the surface and greater than 1,900 ppm at a depth of eighteen inches. The U.S. EPA Site Assessment confirmed IDPH sampling results and further documented that elevated levels of lead exist within the residential neighborhood.

The residential neighborhood has no fences, warning signs, or other barriers to prevent access or warn the public about the hazards of elevated lead levels. During the April, 2001, U.S. EPA Site Assessment, children were observed playing in yards with no vegetative cover and where elevated soil lead were found. The exposure pathways for this Site consist of (1) direct contact with contaminated soil and (2) inhalation of airborne contaminants through windblown particulate matter. Due to the residential nature of this area and a general lack of good ground cover in many yards, people could cause dust particles containing lead to further migrate off site via their activities and into the surrounding residential neighborhoods.

- 3) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

During the Site Assessment, the OSC observed several children throughout the residential neighborhood. IDPH and U.S. EPA have documented that high levels of lead exists on the ground surface and down to eighteen inches. Heavy rains may cause further migration of contaminants off site. Winds could cause dust particles containing heavy metals to migrate into the surrounding community. These weather conditions could result in a continued release of lead described herein to the surrounding soil and air.

- 4) The availability of other appropriate federal or state response mechanisms to respond to

the release.

As a member of the East St. Louis Lead Collaborative Partnership, the U.S. EPA has been asked to assist with clean up efforts at the Eagle Pitcher Lead Residential Site. This Site, as well as other Sites in the area, are a part of a cooperative effort to limit exposure to elevated lead for sensitive populations in East St. Louis. The Illinois Department of Public Health and the U.S. EPA - Region 5 Gateway Initiative asked the U.S. EPA - Region 5, Removal Program to proceed with a time-critical removal action at this residential Site. Neither the State of Illinois nor the City of East St. Louis has the funds to undertake removal of the elevated lead found in this neighborhood.

IV. ENDANGERMENT DETERMINATION

Given the conditions at the Eagle Pitcher Lead Residential Site, the nature of the hazardous substances on Site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The OSC proposes to undertake the following actions to mitigate threats posed by the presence of hazardous substance at the Eagle Pitcher Lead Residential Site:

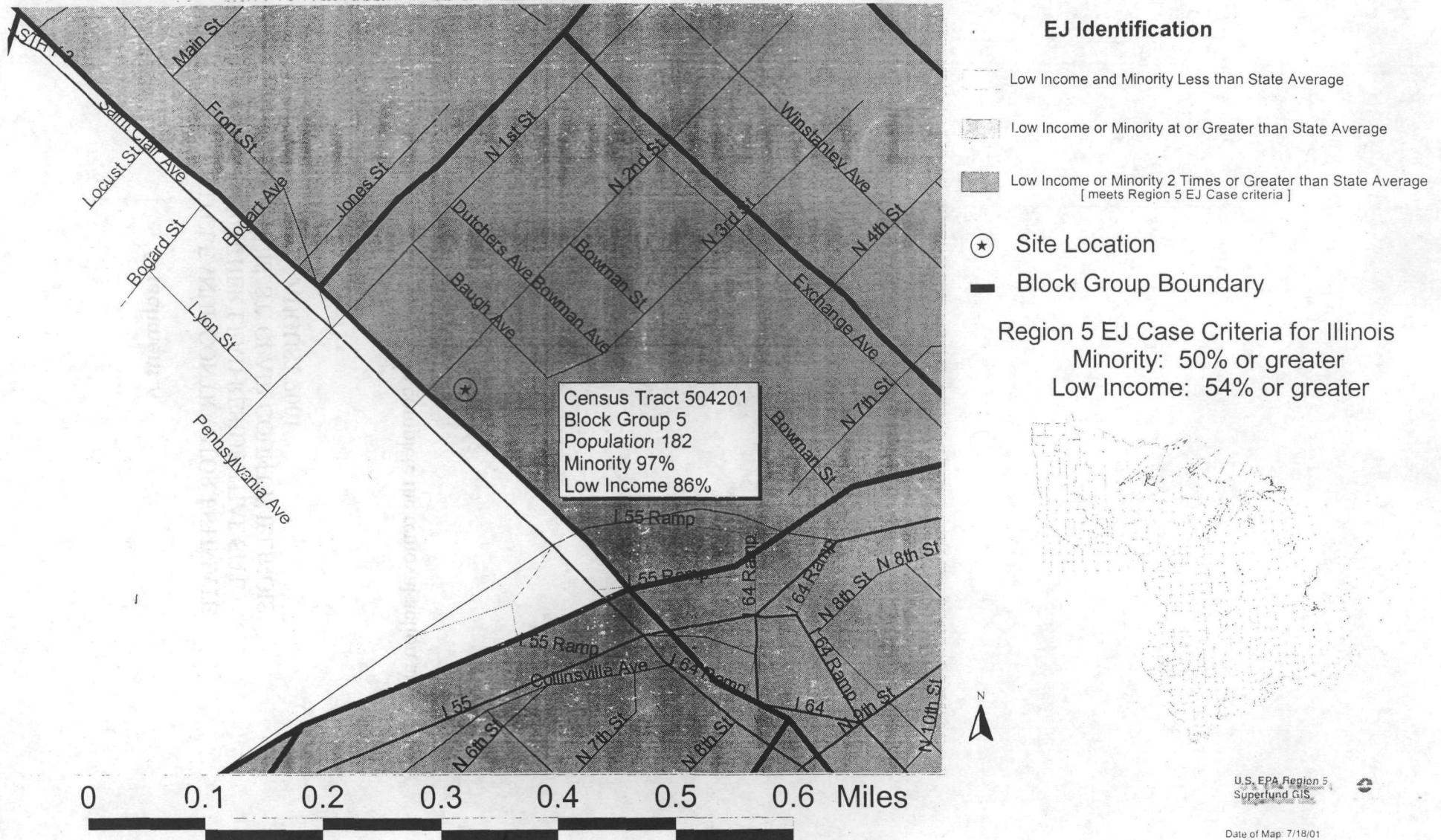
- 1) Develop and implement a Site Health and Safety Plan, including an air monitoring plan and Site contingency plan;
- 2) Develop and implement a Site security plan;
- 3) Characterize, remove and properly dispose of hazardous substance and wastes (contaminated soils) located at the Site in accordance with U.S. EPA's Off-Site Rule (40 CFR 300.440);
- 4) Backfill the excavated areas with clean material and topsoil. Restore and vegetate to prevent soil erosion;

The OSC Has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.41 5(I) of the NCP. The nature of this removal action, as well as the complete removal of all hazardous substance from the Site, will eliminate the need for any post removal Site control.

The estimated costs to complete the above activities are summarized below. These activities will require an estimated 20 working days to complete.

Region 5 Superfund EJ Analysis

Eagle Pitcher Residential Area Site East St. Louis, IL



Attachment A

**DETAILED CLEANUP CONTRACTOR ESTIMATE
EAGLE PITCHER LEAD RESIDENTIAL SITE
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS
AUGUST 2001**

The estimated cleanup contractor costs necessary to complete the removal action at the Eagle Pitcher Lead Residential Site are as follows:

Personnel	\$73,380.32
Equipment	42,410.60
Subcontractors	15,225.00
Transportation and Disposal	<u>\$32,850.00</u>
TOTAL	\$163,865.92

The detailed cleanup contractor cost estimate is presented in Attachment A and estimated project costs are summarized below:

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

Cleanup Contractor	\$163,866
Cleanup Contractor Contingency (15%)	\$ 24,580
START	\$ 13,200
 Extramural Subtotal	 \$201,646
 Extramural Contingency (20%)	 <u>\$ 40,329</u>
 TOTAL EXTRAMURAL COSTS	 \$241,91975

INTRAMURAL COSTS:

U.S. EPA Direct Costs \$30 X [(180 Regional Hours)+ 2 HQ Hours]	\$ 7,290
U.S. EPA Indirect Costs \$63 X (180 Regional Hours)	<u>\$ 15,120</u>
 TOTAL INTRAMURAL COSTS	 <u>\$ 22,410</u>
 TOTAL REMOVAL PROJECT CEILING ESTIMATE	 \$264,385

The response actions described in this memorandum directly address the actual or threatened release at the Site of a hazardous substance, or of a pollutant, or of a contaminant which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable. A letter was sent on August 14, 2001 to Bruce Everetts of the Illinois EPA requesting that the Illinois EPA identify State ARARs. Any State or federal ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Continued risk to public health and the environment will result if no action or delayed action ensues.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in an Enforcement Confidential Addendum (see Attachment B).

IX. RECOMMENDATION

This decision document represents the selected removal action for the Eagle Pitcher Lead Residential Site, East St. Louis St. Clair County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site (see Attachment C). Conditions at the Site meet the criteria of the NCP, 40 C.F.R. § 300.415 (b)(2) for a removal action, and we recommend your approval of the proposed removal action. The total estimated project ceiling, if approved, will be \$234,890.10. Of this, an estimated \$212,480.10 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE : W. E. Myers DATE: 8/31/01
Superfund Division Director

DISAPPROVE: _____ DATE: _____
Superfund Division Director

Attachments:

- A. Detailed Cleanup Contractor Estimate
- B. Enforcement Confidential Addendum
- C. Administrative Record Index
- D. Site Area Map

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cc: C. Stanton, U.S. EPA HQ, 5202G
M. Chezik, U.S. Department of Interior, **w/o Enf. Addendum**
B. Everetts, IL EPA, **w/o Enf. Addendum**
R. Cipriano, IL EPA, **w/o Enf. Addendum**
S. Davis, IL DNR, **w/o Enf. Addendum**

ATTACHMENT B

**ENFORCEMENT ADDENDUM
EAGLE PITCHER RESIDENTIAL SITE**

AUGUST 2001

1 PAGE

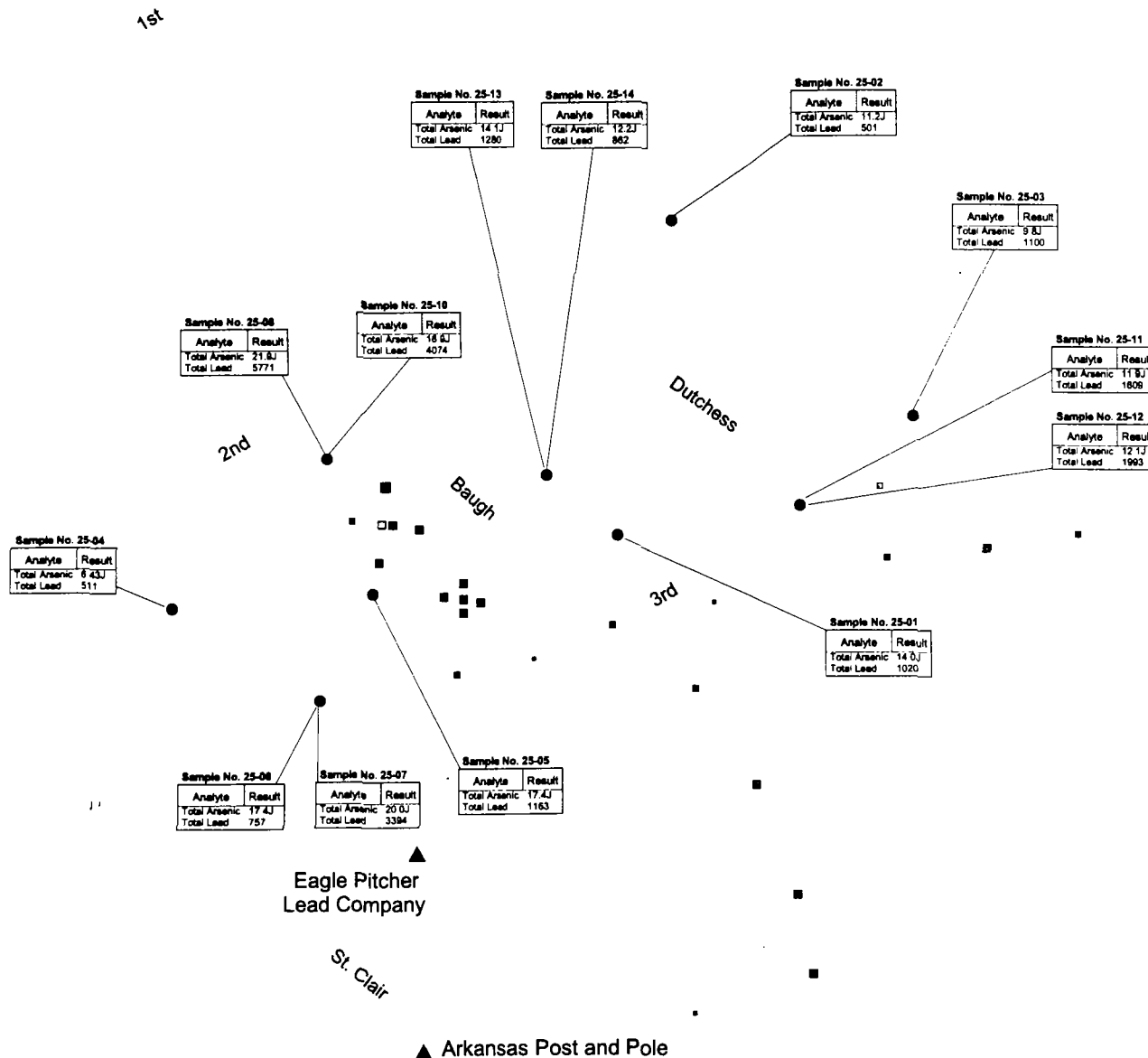
HAS BEEN REDACTED

**NOT RELEVANT TO THE SELECTION
OF THE REMOVAL ACTION**

ATTACHMENT C**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION****ADMINISTRATIVE RECORD
FOR
EAGLE PITCHER LEAD RESIDENTIAL SITE
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS****ORIGINAL
AUGUST 22, 2001**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	12/28/95	Tiebout, D. & T. Kouris, Ecology and Environment, Inc.	Borries, S. U.S. EPA	Letter re: Summary of Residential Soil Sampling Results for the Gateway Initiative Project in East St. Louis	121
2	06/14/01	Tetra Tech EM, Inc.	U.S. EPA	Site Assessment Report for Eagle Pitcher Resi- dential Site	52
3	00/00/00	Turner, K., M. Harris, & T. Cook, U.S. EPA	Muno, W., U.S. EPA	Action Memorandum: Request for a Time- Critical Removal Action at the Eagle Pitcher Residential Site (PENDING)	

Attachment D



Legend:

- May 2000 Soil Sample Containing Metals Exceeding U.S. EPA Region 9 PRGs (mg/kg)

1st Phase Soil Sample Results (ppm)

- 0-399
- 400-999
- 1000-4999
- 5000-9999
- >10,000

2nd Phase Soil Sample Results (ppm)

- 0-399
- 400-999
- 1000-4999
- 5000-9999
- >10,000

Roads

Blood Lead Results (ug/dl)

- 0 - 9.99
- 10 - 19.99
- 20 - 40

Note:

- * J = Estimated value, less than method detection



150 0 150 Feet

Metro East Lead Project Eagle Pitcher Residential Vicinity



Tetra Tech EM Inc.
11116 South Towne Square, Suite 303
St. Louis, Missouri 63123
(314) 892-6322

